=> s graphite/cn

L2 1 GRAPHITE/CN

=> d l2

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 7782-42-5 REGISTRY
CN **Graphite (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN 1502ZV
CN 48NF
CN 5890PT
CN 5BDN
CN 5BGN
CN A 1109
CN A 3
CN A 3 (graphite)
CN ACB 100
CN ACB 150
CN Acheson 545
CN ACP
CN ACP (filler)
CN ACP 1000
CN ACP 3000
CN Aerodag G
CN Aerolor A 05
CN Aerolor A 21
CN AG 1500
CN AGSX
CN Airco 60
CN AO 35
CN AOP
CN AP 2
CN AP 2 (graphite)
CN AQ
CN Aqua-Dag
CN Aqua-Dag E
CN ARV
CN AS 1
CN Asbury 3335
CN Asbury 81120
CN Asbury Micro 440
CN ASP
CN ASP (graphite)
CN ASSP
CN ASSP-E
CN AT 20
CN AT 20 (graphite)
CN AT 40
CN AT 40 (graphite)
CN ATJ
CN ATJ-S
CN ATJ-S graphite
CN AUP
CN AX 280K
CN AX 650K
CN AX 750K

CN AXF 5Q
CN AXF 5Q1
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 12751-41-6, 1399-57-1, 159251-18-0, 50814-81-8, 115344-49-5, 37265-44-4, 37265-48-8, 72840-52-9, 155660-93-8, 82696-74-0, 82696-75-1, 82701-02-8, 82701-03-9, 82701-04-0, 82701-05-1, 82701-06-2, 82709-42-0, 83797-07-3, 84739-05-9, 87934-03-0, 156854-02-3
MF C
CI MNS, COM
LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, TOXLINE, TOXLIT, TRCTHERMO*, TULSA, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

C

62097 REFERENCES IN FILE CA (1967 TO DATE)
1289 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
62140 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> s glycerol monosterate/cn

L3 0 GLYCEROL MONOSTERATE/CN

=> s glycerol/cn

L4 1 GLYCEROL/CN

=> d l4

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 56-81-5 REGISTRY
CN 1,2,3-Propanetriol (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Glycerol (8CI)**
CN Propanetriol (7CI)
OTHER NAMES:
CN 1,2,3-Trihydroxypropane
CN Glycerin
CN Glycerine
CN Glyceritol
CN Glycyl alcohol
CN Glyrol
CN Glysanin
CN Osmoglyn
CN Trihydroxypropane
AR 30918-77-5
FS 3D CONCORD
DR 8013-25-0, 37228-54-9, 75398-78-6, 78630-16-7, 29796-42-7, 30049-52-6
MF C3 H8 O3
CI COM
LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DDFU, DIPPR*, DRUGU, EMBASE, GMELIN*,

HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXLINE,
TOXLIT, TULSA, ULIDAT, USAN, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

35954 REFERENCES IN FILE CA (1967 TO DATE)
3762 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
36001 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

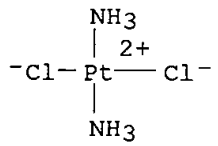
=> s cisplatin/cn

L5 1 CISPLATIN/CN

=> d 15

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 15663-27-1 REGISTRY
CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Platinum, diamminedichloro-, cis- (8CI)
OTHER NAMES:
CN Biocisplatinum
CN Briplatin
CN CDDP
CN cis-DDP
CN cis-Diaminedichloroplatinum(II)
CN cis-Diaminodichloroplatinum(II)
CN cis-Diamminedichloroplatinum
CN cis-Diamminedichloroplatinum(II)
CN cis-Dichlorodiamineplatinum(II)
CN cis-Dichlorodiammineplatinum
CN cis-Dichlorodiammineplatinum(II)
CN cis-Platin
CN cis-Platine
CN cis-Platinous diaminodichloride
CN cis-Platinum
CN cis-Platinum diaminodichloride
CN cis-Platinum II
CN cis-Platinum(II) diaminodichloride
CN cis-Platinum(II) diamminedichloride
CN cis-Platinumdiamine dichloride
CN cis-Platinumdiammine dichloride
CN **Cisplatin**
CN Cisplatinum
CN Cisplatyl
CN CPDD
CN CPPD
CN DDP
CN Neoplatin
CN NSC 119875
CN Platidiam
CN Platinol
CN TR 170
MF Cl2 H6 N2 Pt
CI CCS, COM

LC STN Files: ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, CSNB, DDFU, DRUGPAT, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHAR, PROMT, RTECS*, TOXLINE, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



9902 REFERENCES IN FILE CA (1967 TO DATE)
438 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9921 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s nystatin/cn

L6 1 NYSTATIN/CN

=> d l6

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 1400-61-9 REGISTRY
CN **Nystatin (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Candio-Hermal
CN Diastatin
CN Fungicidin
CN Moronal (antibiotic)
CN Myconystatin
CN Mycostatin
CN Mykostatyna
CN Nistatin
CN Nysfungin
CN Nystan
CN Nystavescent
CN O-V Statin
CN Stamycin
DR 8047-11-8, 11004-84-5, 11121-35-0, 28474-84-2
MF Unspecified
CI COM, MAN
LC STN Files: ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PROMT, RTECS*, TOXLINE, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1540 REFERENCES IN FILE CA (1967 TO DATE)
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1540 REFERENCES IN FILE CAPLUS (1967 TO DATE)
18 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s riboviran/cn

L7 0 RIBOVIRAN/CN

=> s riboviran/cn

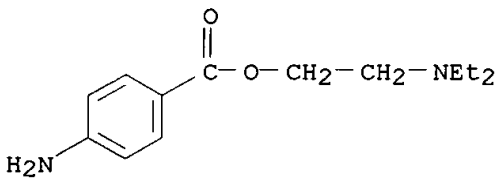
L8 0 RIBOVIRAN/CN

=> s procaine/cn

L9 1 PROCAINE/CN

=> d 19

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 59-46-1 REGISTRY
CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester (8CI)
OTHER NAMES:
CN .beta.-(Diethylamino)ethyl p-aminobenzoate
CN .beta.-Diethylaminoethyl 4-aminobenzoate
CN 2-(Diethylamino)ethyl p-aminobenzoate
CN 2-Diethylaminoethyl 4-aminobenzoate
CN 4-Aminobenzoic acid 2-(diethylamino)ethyl ester
CN 4-Aminobenzoic acid diethylaminoethyl ester
CN Diethylaminoethyl p-aminobenzoate
CN Duracaine
CN Nissocaine
CN p-Aminobenzoic acid 2-diethylaminoethyl ester
CN Procain
CN **Procaine**
CN Procaine base
CN Spinocaine
CN Vitamin H3
FS 3D CONCORD
DR 91484-72-9
MF C13 H20 N2 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA,
CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM*, DDFU, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



2149 REFERENCES IN FILE CA (1967 TO DATE)
35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2149 REFERENCES IN FILE CAPLUS (1967 TO DATE)

58 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d his

(FILE 'HOME' ENTERED AT 10:29:21 ON 20 JUL 1999)

FILE 'REGISTRY' ENTERED AT 10:29:32 ON 20 JUL 1999

L1 4000 S GRAPHITE
L2 1 S GRAPHITE/CN
L3 0 S GLYCEROL MONOSTERATE/CN
L4 1 S GLYCEROL/CN
L5 1 S CISPLATIN/CN
L6 1 S NYSTATIN/CN
L7 0 S RIBOVIRAN/CN
L8 0 S RIBOVIRAN/CN
L9 1 S PROCAINE/CN

=> d kwic 3 4 l74

US PAT NO: 5,653,996 [IMAGE AVAILABLE] L74: 3 of 4
TITLE: Method for preparing **liposomes**

ABSTRACT:
Methods are provided for the preparation of **liposomes** utilizing aerosolization of a solution comprising bilayer-forming materials and optional additional molecules onto an aqueous surface, the aerosolization being mist. . .

SUMMARY:

BSUM(3)

The present invention is directed to methods of making **liposomes**, and the preparation of **liposomes** suitable for particular applications.

SUMMARY:

BSUM(5)

Liposomes are small, spherical vesicles composed primarily of various types of lipids, phospholipids and secondary lipophilic components. These components are normally. . .

SUMMARY:

BSUM(6)

Although most **liposomes** are lipid or lipid-like in nature, the application of Uster et al., WO 92/03123, published 5 Mar. 1992, describes alternative **liposome** bilayer formulations, comprising a surfactant with either a lipid or a cholesterol.

SUMMARY:

BSUM(7)

Liposomes find many therapeutic, diagnostic, industrial and commercial applications. They are used to deliver molecules which are not easily soluble in water, or when a direct timed release is desired. Because of their selective permeability to many chemical compounds, **liposomes** are useful as delivery vehicles for drugs and biological materials. The compound(s) that are to be delivered can be provided within the **liposomes** where they remain protected from the outside environment. Alternatively, the compounds that are targeted for delivery can be incorporated into the lipid bilayer of the **liposomes** if they are lipophilic or have been chemically linked to the lipids. Upon reaching the target site, the **liposomes** may be degraded (for example, by enzymes in the gastro-intestinal tract) or they may fuse with the membranes of cells. Degradation of the **liposomes** or fusion of the **liposomes** with cell membranes results in releasing the compound.

SUMMARY:

BSUM(8)

Several methods of preparing **liposomes** are known. For a general review of commonly used methods, see Szoka et al., Ann. Rev. Biophys. Bioeng., 9:467-508 (1980).. . .

SUMMARY:

BSUM(9)

Methods are also known for atomizing a solution of lipids to form **liposomes**, however these methods typically require atomization under pressure, which is inefficient and results in a loss of **liposome**-component solution. U.S. Pat. No. 4,508,703 issued 2 Apr. 1985 discloses preparation of **liposomes** by dissolving lipids in an appropriate solvent, and atomizing this solution by spraying it through a spray nozzle or atomizer. . . gas heated to a higher temperature than the boiling point of the solvent. The solvent evaporates, and lipid particles and **liposomes** are formed and collected as a dried mixture. The dried **liposomes** and lipid particles can then be hydrated in an aqueous medium.

SUMMARY:

BSUM(10)

PCT Application WO 89/11850, published 14 Dec. 1989, teaches a method for forming **liposomes** having an additional material entrapped in the lipid bilayer, or in association with a component of the bilayer, rather than. . .

SUMMARY:

BSUM(11)

U.K. patent application GB 2,145,107A published 20 Mar. 1985 teaches producing an aerosol spray containing **liposomes**. The **liposomes** are produced by combining under pressure an aqueous solution and a lipid mixture, and passing the mixture, still under pressure, through a nozzle or other arrangement to produce an aerosol spray containing **liposomes**.

SUMMARY:

BSUM(12)

WO 87/07502 published 17 Dec. 1987 discloses formation of pro-**liposome** aerosols by spraying under pressure a solution containing one or more volatile liquid propellants, one or more membrane lipids dissolved. . .

SUMMARY:

BSUM(13)

EP 357,773 published 14 Mar. 1990 discloses a method of preparing **liposomes** by dissolving lipids in an organic solvent, evaporating the solvent, adding an aqueous solution to the dried lipid film, ultrasonicating. . . the solution with an inert gas to pressurize the solution, and delivering the pressurized solution through a nozzle to form **liposomes**.

SUMMARY:

BSUM(15)

U.S. . . . a therapeutic dosage of a drug to the lungs, for treating a lung condition or disease. An aqueous suspension of **liposomes** containing the drip in **liposome**-entrapped form is aerosolized under conditions which produce aerosol particle sizes favoring particle deposition in a selected region of the respiratory tract. These conditions involve the use of a pneumatic nebulizer, wherein the aqueous **liposome** suspension is placed in the nebulizer, and compressed air is supplied to the nebulizer. The pressurized air forces the **liposome** suspension through a nozzle having a defined size orifice. This aerosol is then directed against a baffle which traps larger. . . particles and passes smaller ones. This patent also suggests using an unspecified device suitable for aerosolizing an aqueous suspension of **liposomes** using ultrasonic energy to break up a carrier fluid into a fine mist of aqueous particles.

SUMMARY:

BSUM(19)

While many of the above cited references disclose methods of preparing **liposomes**, the methods are multi-step and thus cumbersome and labor intensive, or result in wasting lipid and/or other bilayer-forming material, or. . . low rate of incorporation of the active agent or passenger molecule desired to be incorporated into or associated with the **liposome**.

SUMMARY:

BSUM(20)

Accordingly, it is an object of the present invention to provide an economic and efficient method of preparing **liposomes** suitable for use on a large scale. This and other objects will be apparent to one of ordinary skill in. . .

SUMMARY:

BSUM(22)

In accordance with the objects of this invention, methods are provided for preparing **liposomes** comprising preparing a first solution of bilayer-forming materials (such as lipids, surfactants, or lipid-like bilayer-forming materials), and any optional passenger. . . and without added pressurization spraying the first solution onto or below the surface of a second solution, thereby forming a **liposome** suspension. Without being limited to any particular mechanism of action, it is believed that, as the solvent is extracted and diluted in the second solution, the bilayer-forming materials (and to some extent the passenger molecules) become insoluble, forming **liposomes** instantly.

SUMMARY:

BSUM(23)

Following the **liposome** formation, the suspension may be concentrated, such as by ultrafiltration. A preferred embodiment of this invention uses a tangential flow stack comprised of a Filtron membrane module. After the desired **liposome** concentration is reached, residual solvent may be removed, such as by diafiltration with fresh buffer if desired.

SUMMARY:

BSUM(24)

The concentrated **liposome** suspension may be further processed, such as by formulating the suspension for use, or introducing the **liposomes** into vials or other containers and lyophilized or otherwise readied for storage. For extended storage, it is currently preferred that. . .

SUMMARY:

BSUM(26)

In . . . embodiment, the bilayer-forming materials of the first solution include lipids and/or proteins present in naturally occurring lung surfactants, and the **liposomes** that are produced have a therapeutic use for patients having or at risk of having respiratory distress.

DETDESC:

DETD(2)

This invention describes new and useful methods for the preparation of **liposomes** for use in the delivery of therapeutic, diagnostic or cosmetic agents. The present invention provides an economic and efficient method of preparing **liposomes** on a large scale.

DETDESC:

DETD(3)
I. Preparing **Liposome** Compositions

DETDESC:

DETD(4)

A. **Liposome** Components are typically amphipathic materials which can form a closed lamellar bilayer phase (referred to herein as "bilayer forming materials"), plus additional materials to be delivered or useful in targeting delivery or conferring useful properties on the **liposome** such as extended half-life, and solvent. Mixtures of components may be used.

DETDESC:

DETD(7)

In certain embodiments, the **liposome** is sterically stabilized by the incorporation of polyethylene glycol (PEG), or by the PEG headgroups of a synthetic phospholipid (PEG. . .

DETDESC:

DETD(8)
2. Surfactants are suitable bilayer forming materials for use in this invention, typically a surfactant with good miscibility such as **Tween**, Triton, sodium dodecyl sulfate (SDS), sodium laurel sulfate, or sodium octyl glycoside. A preferred surfactant forms micelles when added to. . .

DETDESC:

DETD(9)

The application of Uster et al, WO 92/03123, published 5 Mar. 1992,

describes alternative **liposome** bilayer formulations, comprising a surfactant with either a lipid or a cholesterol. These ingredients and the methods for their use. . .

DETDESC:

DETD(11)
4. Double chain glycerophospholipids may also be incorporated into the **liposomes** of this invention.

DETDESC:

DETD(12)
5. Additional agents are desirably incorporated into or associated with the **liposomes** of this invention. These additional agents are referred to herein as "passenger molecules", and are materials intended to solubilize in the **liposome** and be retained in the space formed within the spherical bilayer, or to be retained within a formed bilayer or. . . into the liposomal bilayer. Alternatively, the passenger molecules are admixed with the bilayer-forming materials used in the preparation of the **liposomes**. Alternatively, the passenger molecules and the **liposomes** are formulated into conventional pharmacologically acceptable vehicles as described below.

DETDESC:

DETD(13)

Passenger . . . trifluorouridine, vidarabine, azidothymidine, ribavirin, phosphonofomate, phosphonoacetate, and acyclovir) anti-inflammatory agents (e.g. prednisolone, dexamethasone, and non-steroidal anti-inflammatories). anti-cancer drugs (such as **cis-platin** or 5-fluorouracil), anti-parasitics, anti-allergic and anti-asthmatic agents (such as allergens, cromolyn, cemetidine, naphazoline, lodoxamide, ephedrine and phenylephinephrine), dyes, fluorescent compounds,. . .

DETDESC:

DETD(15)

The invention encompasses cytotoxic moieties encompassed within the **liposome**, or conjugated to the **liposome**. Conjugates of the **liposome** and such cytotoxic moieties are made using a variety of bifunctional protein coupling agents. Examples of such reagents are SPDP,. . . tolylene 2,6-diisocyanate and bis-active fluorine compounds such as 1,5-difluoro-2,4-dinitrobenzene. The lysing portion of a toxin may be joined to the **liposome**. A particularly preferred toxin is the ricin A chain. Most advantageously the ricin A chain is deglycosylated or produced without. . . liver) and produced through recombinant means. In another embodiment, whole ricin (A chain plus B chain) is conjugated to the **liposome** or incorporated into the **liposome** if the galactose binding property of B-chain can be blocked ("blocked ricin"). An advantageous method of making a ricin immunotoxin suitable for use as a passenger molecule or attached to a **liposome** is described in Vitetta et al., Science 238:1098 (1987) hereby incorporated by reference.

DETDESC:

DETD(16)

In . . . better penetrate tissue to reach infected cells. These conjugates may be used as a passenger molecule or attached to a **liposome**.

DETDESC:

DETD(17)

In another embodiment, fusogenic **liposomes** are filled with a cytotoxic drug and the **liposomes** are coated with antibodies specifically binding an infected cell, such as a T-cell presenting on its surface a HIV antigen

DETDESC:

DETD(18)

The . . . an organism to which it is administered. Representative examples of biologically useful polypeptides include, among others, nucleoproteins, glycoproteins, and lipoproteins. **Liposomes** made according to this invention are also used to delivery nucleic acids for gene therapy, to provide properly functioning replacement. . .

DETDESC:

DETD(19)

In . . . of lung surfactant. The surfactants may be part of the bilayer, and alternatively or additionally may be presented within a **liposome**. Lung surfactant may be prepared by known methods from synthetic dipalmitoylphosphatidylcholine (DPPC), egg or synthetic phosphatidylglycerol (PC), and purified surfactant. . .

DETDESC:

DETD(20)

Cosmetics or cosmetic ingredients such as hair sprays, colorants, dyes, and the like are appropriate for incorporation into a **liposome**. Medicaments used in mouthwashes, throat sprays, antiseptic sprays and the like are also suitable for use in the practice of. . .

DETDESC:

DETD(21)

Drugs or other agents for therapeutic or diagnostic administration may be incorporated into or associated with a **liposome** according to the present methods, and specifically targeted to a site within a patient. In preferred embodiments, therapeutic and diagnostic agents are effectively administered to a patient by coupling a **liposome** comprising or associated with those agents to a monoclonal antibody or immunoglobulin fragment (such as a Fab' fragment), a receptor,. . .

DETDESC:

DETD(22)

In yet other embodiments, the **liposome** incorporates or is associated with a glycophospholipid-linked polypeptide. In one example of this embodiment, the carboxyl terminal domain that specifies. . .

DETDESC:

DETD(23)

Combinations of passenger molecules are desirable. For example, in a particularly preferred embodiment, **liposomes** within which a toxic drug has been packaged, and further comprising or associated with

GPI-linked to CD4, are thus targeted. . . HIV-infected cells which express gp120 on their surfaces. Similar GPI fusions to ligands or antibodies can be used to target **liposomes** containing toxic agents to cancer cells having receptors or antigens which specifically bind to the ligands or antibodies.

DETDESC:

DETD(25)
6. . . . or propyl glycol and the like. In addition, the solvent must be appropriate for the particular use intended for the **liposome**. If the **liposome** is to be employed in vivo, the solvent must be utilizable without causing toxicity in that application and generally must. . .

DETDESC:

DETD(27)

B. **Liposome** Preparation according to this invention involves a spray technique to form **liposomes** directly by spraying a first solution of solvent and bilayer-forming material (and any passenger molecules) onto the surface of a. . . is extracted and diluted in the buffer, the bilayer-forming materials (and to some extent the passenger molecules) become insoluble, forming **liposomes** instantly.

DETDESC:

DETD(29)

To prevent oxidation of the lipids, the solution comprising the **liposome** components may be kept under a constant stream of an inert gas such as nitrogen to produce a dry nitrogen. . .

DETDESC:

DETD(35)

In . . . This alternate method is advantageous where the first solution solvent is immiscible in water to facilitate size consistency among the **liposomes** formed.

DETDESC:

DETD(37)

A variety of commercially available nozzles or similar devices exist that can be used for atomizing a bilayer-forming solution to form **liposomes**. According to this invention, nozzles which do not require high pressure to operate are suitable. Preferred embodiments utilize a spray. . .

DETDESC:

DETD(38)

The . . . at which the nozzle operates tends to establish the size of the atomized particle and relates to the size of **liposomes** formed; the higher the frequency, typically the smaller the drops in the spray, and hence generally the smaller the **liposome** eventually formed. A high frequency nozzle typically requires a relatively small nozzle size, resulting in a low flow capacity and. . . and second solutions (including the solvents used and the characteristics of any passenger molecules) also have an influence on the **liposome** sizes recovered from the nozzle spray.

DETDESC:

DETD(41)

C. **Liposome** Recovery is commenced at a time following the **liposome** formation, the suspension. The **liposome** suspension may be used without further processing for certain applications. For other applications, it is desired to recover the **liposomes** from the second solution. The may be accomplished by a variety of known methods, such as filtration or chromatographic separation of the **liposomes**.

DETDESC:

DETD(42)

In preferred embodiment, the **liposomes** are concentrated using ultrafiltration, for example using a tangential flow stack comprised of a Filtron 100 KD membrane module. After the desired **liposome** concentration is reached, the residual solvent may be flushed out by diafiltration with fresh buffer if desired.

DETDESC:

DETD(43)

In . . . second solution or other buffer as desired for a short period of time, approximately 0-30 minutes, and preferably 10-15. The **liposome** suspension is circulated through the filter system, generally at rate a preferred rate of about 1-5 (and preferably 2) liters/min,. . . diafiltered with six volumes of fresh second solution. The filtration system is advantageously drained by pressuring with air. The concentrated **liposome** suspension is collected. If desired, the final suspension volume is measured and may be diluted or further concentrated if desired. . .

DETDESC:

DETD(44)

D. **Liposome** Sizing. Without being limited to a particular theory of operation, it is believed that the clearance rate of **liposomes** from blood or tissue depends on their particle size as well as the specific ingredients they contain. In certain embodiments, **liposomes** are selected for therapeutic administration which are approximately 50-100 nm in diameter, or larger. In other embodiments, faster clearance is desired or smaller size is advantageous for other reasons, and **liposomes** are selected of less than 50-nm diameter. The size of the **liposome** may also be related to its stability; in some embodiments for example, a larger size **liposome** can be relatively unstable, compared to a smaller **liposome**, and the selection criteria may take advantage of this feature. For example, a relatively large sized and relatively unstable **liposome** may be useful for administration of pharmaceuticals in the lung, where instability leads to rapid spreading of components. The size of the **liposome** for any particular application, whether therapeutic, diagnostic, commercial, industrial, or cosmetic, shall be selected according to the characteristics desired.

DETDESC:

DETD(45)

The **liposome** suspension may be sized to achieve a selective size distribution having optimal properties. Several techniques are available for reducing the sizes and size heterogeneity of **liposomes**.

Sonicating a **liposome** suspension either by bath or probe sonication produces a progressive size reduction down to less than about 0.05 microns in size. In a typical homogenization procedure, **liposomes** are recirculated through a standard emulsion homogenizer until selected **liposome** sizes are observed. In both methods, the particle size distribution can be monitored by conventional laser-beam particle size discrimination.

DETDESC:

DETD(46)

Extrusion of **liposomes** through a small-pore polycarbonate membrane is an effective method for reducing **liposome** sizes down to a relatively well-defined size distribution, depending on the pore size of the membrane. Typically, the suspension is cycled through the membrane several times until the desired **liposome** size distribution is achieved. One such filter is the 0.45 .mu.m Acrodisc filter (Gelmar Sciences, Inc., Ann Arbor, Mich.). The **liposomes** may be extruded through successively smaller-pore membranes, to achieve a gradual reduction in **liposome** size.

DETDESC:

DETD(47)

Centrifugation and molecular sieve chromatography are other methods which are available for producing a **liposome** suspension with particle sizes below a selected threshold of 1 micron or less. These two methods both involve preferential removal of larger **liposomes**, rather than conversion of large particles to smaller ones; **liposome** yields are correspondingly reduced.

DETDESC:

DETD(49)

E. Removing Non-Integrated Passenger Molecules And Bilayer-Forming Material is desirable to increase the ratio of **liposomes** having an entrapped passenger molecule to free materials. Several methods are available for removing free material from a **liposome** suspension. Sized **liposome** suspensions can be pelleted by high-speed centrifugation, leaving free material and very small **liposomes** in the supernatant. Another method involves concentrating the suspension by ultrafiltration, then resuspending the concentrated **liposomes** in a replacement medium. Alternatively, gel filtration can be used to separate larger **liposome** particles from solute molecules. Also, some free material can be removed using ion-exchange or affinity chromatography to bind the free material in its free form, but not in **liposome**-bound form.

DETDESC:

DETD(51)

F. Sterility may be an important process consideration for **liposomes** designed for in vivo or in vitro use. If desired, spray nozzles, filters, tubing, spray chambers, mixing tanks, feed solution. . .

DETDESC:

DETD(52)

The concentrated **liposome** suspension may be further processed, such as by formulating the suspension as described infra, or filled into vials

or other. . .

DETDESC:

DETD(55)

This invention provides novel methods for the preparation of **liposomes** which can be used in a variety of formulations and for a variety of diagnostic, commercial, cosmetic, industrial, and therapeutic. . .

DETDESC:

DETD(56)

For therapeutic use, the **liposomes** are placed into pharmaceutically acceptable, sterile, isotonic formulations together with required cofactors, and optionally are administered by standard means well. . . preferably liquid, and is ordinarily a physiologic salt solution containing non-phosphate buffer at pH 6.8-7.6, or may be lyophilized powder. **Liposomes** may be formulated with pharmacologically acceptable detergents such as **Tween** 20 or polyethylene glycol (PEG), or with serum albumin.

US PAT NO: 5,391,430 [IMAGE AVAILABLE] L70: 1 of 2

ABSTRACT:
A product for heating a load at different rates using microwave radiation provided at a substantially constant power level. The product may include a polymer matrix alone or in combination with a metal substrate, with the polymer matrix located on the surface of the metal substrate that does not contact the load and is thus disposed to the incident microwave radiation. The matrix includes dielectric and magnetic components in amounts that enable at least initial absorption of the incident radiation and thus initial thermalization of the radiation within the matrix. The matrix is designed to change its rate of thermalization and the rate at which it conducts thermalized radiation to the substrate and load after a predetermined time of exposure to the radiation at a predetermined temperature of the matrix.
US-CL-CURRENT: 428/328; 219/728; 426/107, 109; 428/402, 402.2, **402.24**, 457

SUMMARY:

BSUM(2)

The . . . semi-transparent materials, and particularly to a product that automatically provides time dependent heating of such loads using thermalization of microwave **energy** by the absorbing material as the primary **source** of heat.

DETDESC:

DETD(8)

Another . . . overlayer (d-layer) for aluminum sheet. Examples of appropriate particulates are 1 to 10 micrometer diameter particles of layered materials like **graphite**, **graphite** oxide, or pillared clays. Such materials expand in the direction normal to the intercalant planes by 100% to 200% when. . . The critical application temperature defines the stability limit of the intercalant molecule in the particle. For example, water intercalated into **graphite** oxide rapidly exits the matrix at a temperature near 100.degree. C. producing an expected particle shrinkage in the direction normal. . .

DETDESC:

DETD(10)

A . . . temperature involves using, as one ingredient of the particulate mixture comprising the active material, a filler of glass or polymer **microspheres** that encapsulate a liquid, e.g., water or a solid that volatilizes at a specified temperature. Initially, at the start of. . .

DETDESC:

DETD(12)

However, . . . overlayer to the surrounding atmosphere. Depletion of this filler acts to lower the thermal conductance of the overlayer since

the **microspheres** now represent empty pores which are much less conductive than the original filled **microspheres**. Moreover, the volatilization process can further increase the effective porosity of the overlayer through promoting microcracking of the matrix, thereby. . .

CLAIMS:

CLMS(1)

What . . .
incident radiation and thus conversion of said radiation to heat within the overlayer, said dielectric particles including aluminum flake, carbon, **graphite**, pillared clays or ferroelectric crystals of perovskite structure, and combinations thereof, while said magnetic particles include iron or ferrite, or. . .

CLAIMS:

CLMS(3)

3. The laminate of claim 1 in which the polymer overlayer contains minute, layered particles of **graphite**, **graphite** oxide or pillared clays, or combinations thereof, and intercalant molecules including alcohol or water, as ingredients of the overlayer.

CLAIMS:

CLMS(4)

4. . . . 1 in which the polymer overlayer contains layered particles and intercalant molecules including alcohols or water, and glass or polymer **microspheres** that encapsulate a liquid or solid that is capable of volatilizing at a specified temperature.

US PAT NO: 5,248,428 [IMAGE AVAILABLE] L70: 2 of 2

ABSTRACT:
A composite article comprising, in the unexpanded form, a fibrillated PTFE matrix and a combination of energy expandable hollow polymeric particles and sorptive particles, which composite, on applying energy such as steam, heat, or laser energy, provides an expanded article having increased void volume and decreased density. The expanded articles are porous and efficient articles for separation and purification applications. In flat or rolled form, the composite article can be used in separation devices.
US-CL-CURRENT: 210/656; 96/101; 210/198.2, 469, 500.36, 502.1, 503, 508, 679; 428/323, 327, 328, 329, **402.21**, 422

SUMMARY:

BSUM(10)

U.S. Pat. Nos. 4,199,628 and 4,265,952 relate to a vermicular expanded **graphite** composite blended with a corrosion resistant resin such as PTFE with improved impermeability to corrosive fluids at high temperatures.

SUMMARY:

BSUM(11)

U.S. . . . making a composite material comprised of a fibrous matrix, expandable polymeric microbubbles, and a formaldehyde-type resin involving distributing the expandable **microspheres** (either expanded or unexpanded) into the fiber matrix, expanding the polymeric bubbles by

application of heat (in the case where. . .

DETDESC:

DETD(9)

Expandable . . . addition, the expandable particulate is not homogeneous, i.e., it is not a uniform bead of polymer but rather comprises a **polymeric shell** having a central core comprised of a fluid, preferably liquid, material. A further requirement is that the overall dimensions of. . .

DETDESC:

DETD(10)

SOURCE: JOURNAL OF CHEMICAL PHYSICS, (01 JAN 1992) Vol. 96, No. 1,
pp. 577-585.
ISSN: 0021-9606.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: ENGLISH
REFERENCE COUNT: 44
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L26 ANSWER 7 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
AB J774 macrophages load with cholesteryl ester (CE) when incubated with acetylated low-density lipoprotein and cholesterol-rich **liposomes** ; the CE accumulates as cytoplasmic inclusions 1-2 .mu.m in diameter. The CE core of the droplet comprises about 90% of. . . The eutectic is 83% w/w CO, and it melts at 49-50.degree. C. Below this temperature, CO and CP
form two **immiscible** crystalline phases due to the very limited ability of the unsaturated oleate and saturated palmitate acyl chains to mix in. . . at.37.degree. C, the growth temperature of the cells. CO and CP are miscible at all ratios in either the **liquid** or the **liquid**-crystalline state where the hydrocarbon chains are melted. The smectic liquid-crystal phase is metastable at all ratios of CO and CP,. . . this particle comprises microcrystals of CP suspended in a fluid CO-rich phase. The fluid phase could be either metastable, smectic **liquid**-crystal or metastable, isotropic **liquid**.
ACCESSION NUMBER: 1988:328614 BIOSIS
DOCUMENT NUMBER: BA86:35165
TITLE: PHYSICAL STATE OF CHOLESTERYL ESTERS DEPOSITED IN CULTURED MACROPHAGES.
AUTHOR(S): SNOW J W; MCCLOSKEY H M; GLICK J M; ROTHBLAT G H; PHILLIPS M C
CORPORATE SOURCE: CHEM. DEP., PHILADELPHIA COLL. PHARM. SCI., PHILADELPHIA, PA. 19104.
SOURCE: BIOCHEMISTRY, (1988) 27 (10), 3640-3646.
CODEN: BICHAW. ISSN: 0006-2960.
FILE SEGMENT: BA; OLD
LANGUAGE: English

=> d his

(FILE 'HOME' ENTERED AT 10:29:21 ON 20 JUL 1999)

FILE 'REGISTRY' ENTERED AT 10:29:32 ON 20 JUL 1999
L1 4000 S GRAPHITE
L2 1 S GRAPHITE/CN
L3 0 S GLYCEROL MONOSTERATE/CN
L4 1 S GLYCEROL/CN
L5 1 S CISPLATIN/CN
L6 1 S NYSTATIN/CN
L7 0 S RIBOVIRAN/CN
L8 0 S RIBOVIRAN/CN
L9 1 S PROCAINE/CN
L10 0 S SCISEARCH WPIDS BIOSIS

FILE 'SCISEARCH, BIOSIS' ENTERED AT 10:32:50 ON 20 JUL 1999
L11 128577 S MICROBUBBLE OR (MICRO BUBBLE) OR LIPOSOME# OR SHELL OR SPHERE
L12 30734 S GRAPHITE
L13 1 S GLYCEROL MONOSTERATE
L14 100733 S GLYCEROL OR GLYCERIN# OR GLYCER?
L15 78254 S CISPLATIN OR PLATINUM OR CPDD OR (CIS PLATIN?)
L16 3845 S NYSTATIN OR MYCOSTATIN OR NISTATIN OR FUNGICIDIN
L17 0 S RIBOVIRAN

L18	18709	S	PROCAIN# OR BENZOIC OR SPINOCAINE OR DURACAINE
L19	17230	S	LIQUID (5W) LIQUID
L20	3548	S	MULTILAMELLAR OR (MULTI LAMELLAR)
L21	140786	S	RADIOFREQ? OR ULTRASONIC OR ULTRASOUND
L22	236	S	L11 AND L19
L23	1	S	L22 AND L20
L24	1	S	L22 AND L21

US PAT NO: 5,391,430 [IMAGE AVAILABLE] L70: 1 of 2

ABSTRACT:
A product for heating a load at different rates using microwave radiation provided at a substantially constant power level. The product may include a polymer matrix alone or in combination with a metal substrate, with the polymer matrix located on the surface of the metal substrate that does not contact the load and is thus disposed to the incident microwave radiation. The matrix includes dielectric and magnetic components in amounts that enable at least initial absorption of the incident radiation and thus initial thermalization of the radiation within the matrix. The matrix is designed to change its rate of thermalization and the rate at which it conducts thermalized radiation to the substrate and load after a predetermined time of exposure to the radiation at a predetermined temperature of the matrix.
US-CL-CURRENT: 428/328; 219/728; 426/107, 109; 428/402, 402.2, **402.24**, 457

SUMMARY:

BSUM(2)

The . . . semi-transparent materials, and particularly to a product that automatically provides time dependent heating of such loads using thermalization of microwave **energy** by the absorbing material as the primary **source** of heat.

DETDESC:

DETD(8)

Another . . . overlayer (d-layer) for aluminum sheet. Examples of appropriate particulates are 1 to 10 micrometer diameter particles of layered materials like **graphite**, **graphite** oxide, or pillared clays. Such materials expand in the direction normal to the intercalant planes by 100% to 200% when. . . The critical application temperature defines the stability limit of the intercalant molecule in the particle. For example, water intercalated into **graphite** oxide rapidly exits the matrix at a temperature near 100.degree. C. producing an expected particle shrinkage in the direction normal. . .

DETDESC:

DETD(10)

A . . . temperature involves using, as one ingredient of the particulate mixture comprising the active material, a filler of glass or polymer **microspheres** that encapsulate a liquid, e.g., water or a solid that volatilizes at a specified temperature. Initially, at the start of. . .

DETDESC:

DETD(12)

However, . . . overlayer to the surrounding atmosphere. Depletion of this filler acts to lower the thermal conductance of the overlayer since the **microspheres** now represent empty pores which are much less conductive than the original filled **microspheres**. Moreover, the

volatilization process can further increase the effective porosity of the overlayer through promoting microcracking of the matrix, thereby. . .

CLAIMS:

CLMS(1)

What . . .
incident radiation and thus conversion of said radiation to heat within the overlayer, said dielectric particles including aluminum flake, carbon, **graphite**, pillared clays or ferroelectric crystals of perovskite structure, and combinations thereof, while said magnetic particles include iron or ferrite, or. . .

CLAIMS:

CLMS(3)

3. The laminate of claim 1 in which the polymer overlayer contains minute, layered particles of **graphite**, **graphite** oxide or pillared clays, or combinations thereof, and intercalant molecules including alcohol or water, as ingredients of the overlayer.

CLAIMS:

CLMS(4)

4. . . . 1 in which the polymer overlayer contains layered particles and intercalant molecules including alcohols or water, and glass or polymer **microspheres** that encapsulate a liquid or solid that is capable of volatilizing at a specified temperature.

US PAT NO: 5,248,428 [IMAGE AVAILABLE] L70: 2 of 2

ABSTRACT:
A composite article comprising, in the unexpanded form, a fibrillated PTFE matrix and a combination of energy expandable hollow polymeric particles and sorptive particles, which composite, on applying energy such as steam, heat, or laser energy, provides an expanded article having increased void volume and decreased density. The expanded articles are porous and efficient articles for separation and purification applications. In flat or rolled form, the composite article can be used in separation devices.
US-CL-CURRENT: 210/656; 96/101; 210/198.2, 469, 500.36, 502.1, 503, 508, 679; 428/323, 327, 328, 329, **402.21**, 422

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L23 ANSWER 1 OF 1 BIOSIS COPYRIGHT 1999 BIOSIS
ACCESSION NUMBER: 1998:428156 BIOSIS
DOCUMENT NUMBER: PREV199800428156
TITLE: Role of the sterol supelatrice in the partitioning of the antifungal drug nystatin into lipid membranes.
AUTHOR(S): Wang, Mei Mei; Sugar, Istvan P.; Chong, Parkson Lee-Gau (1)
CORPORATE SOURCE: (1) Dep. Biochem., Temple Univ. Sch. Med., Philadelphia, PA 19140 USA
SOURCE: Biochemistry, (Aug. 25, 1998) Vol. 37, No. 34, pp. 11797-11805. ISSN: 0006-2960.
DOCUMENT TYPE: Article
LANGUAGE: English
AB. . . concentration dependencies of the partition coefficient for partitioning of nystatin into ergosterol/dimyristoyl-L-alpha-phosphatidylcholine (DMPC), cholesterol/DMPC, ergosterol/1-palmitoyl-2-oleoyl-L-alpha-phosphatidylcholine (POPC), and ergosterol/POPC/1-palmitoyl-2-oleoxyl-L-alpha-phosphatidylethanolamine (POPE) **multilamellar** vesicles have been determined fluorometrically at 37degreeC using -0.3-1.0 mol % sterol concentration increments over a wide concentration range (e.g.,. . .
IT Methods & Equipment
fluorescence measurement: Analysis/Characterization Techniques: CB, analytical method; high performance **liquid** chromatography: **liquid** chromatography, purification method; **liposome** preparation: Synthesis/Modification Techniques, synthetic method; partition coefficient calculation: mathematical method; thin layer chromatography: liquid chromatography, purification method; Beckman model 324. . .

L26 ANSWER 1 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
ACCESSION NUMBER: 1998:610733 SCISEARCH
THE GENUINE ARTICLE: 107VQ
TITLE: Voltammetry at micropipet electrodes
AUTHOR: Shao Y H; Mirkin M V (Reprint)
CORPORATE SOURCE: CUNY QUEENS COLL, DEPT CHEM & BIOCHEM, FLUSHING, NY 11367 (Reprint); CUNY QUEENS COLL, DEPT CHEM & BIOCHEM, FLUSHING, NY 11367
COUNTRY OF AUTHOR: USA
SOURCE: ANALYTICAL CHEMISTRY, (1 AUG 1998) Vol. 70, No. 15, pp. 3155-3161.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0003-2700.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS; LIFE
LANGUAGE: English
REFERENCE COUNT: 36

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB . . . use of micropipet electrodes for quantitative voltammetric measurements of ion-transfer (IT) and electron-transfer (ET) reactions at the interface between two **immiscible** electrolyte solutions (ITIES) requires knowledge of geometry of the liquid interface. The shape of the meniscus formed at the pipet:tip. . . studied in situ by video microscopy under controlled pressure. The shape of the interface: dan be changed from a complete **sphere** to: a concave spherical cap by varying the pressure applied to the pipet, and the diffusion current to the pipet. . .

STP KeyWords Plus (R): SCANNING ELECTROCHEMICAL MICROSCOPY; ION TRANSFER-REACTIONS; **LIQUID-LIQUID** INTERFACE; WATER INTERFACE; KINETICS; MICROELECTRODE; ELECTROLYTES; DIBENZO-18-CROWN-6; GEOMETRY; SECM

=> d l26 2-5 ibib kwic

L26 ANSWER 2 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
ACCESSION NUMBER: 97:821639 SCISEARCH
THE GENUINE ARTICLE: YE012
TITLE: Coalescence limited by hydrodynamics
AUTHOR: Nikolayev V S (Reprint); Beysens D A
CORPORATE SOURCE: CEA GRENOBLE, DEPT RECH FONDAMENTALE MATIERE CONDENSEE, SI3M, 17 RUE MARTYRS, F-38054 GRENOBLE 9, FRANCE (Reprint)
COUNTRY OF AUTHOR: FRANCE
SOURCE: PHYSICS OF FLUIDS, (NOV 1997) Vol. 9, No. 11, pp. 3227-3234.
Publisher: AMER INST PHYSICS, CIRCULATION FULFILLMENT DIV, 500 SUNNYSIDE BLVD, WOODBURY, NY 11797-2999.
ISSN: 1070-6631.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: English
REFERENCE COUNT: 12

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We consider an assembly of **liquid** drops imbedded in another **immiscible liquid** of similar viscosity. It is shown that a coalescence between two drops induces another coalescence when the

between the ion and the solvent in the first solvation **shell**. The surface energy of the polyanions is larger than that of the conventional **liquid\liquid** interface, suggesting a hard solvated **shell**. The discussion is directed to the energy forming the cavity, the effect of the second solvation **shell**, the Kelvin effect and the electrostatic contribution except the electrode potential.

STP KeyWords Plus (R): **IMMISCIBLE** ELECTROLYTE-SOLUTIONS; ELECTROCHEMICAL POLARIZATION PHENOMENA; LAYER CONTINUUM MODEL; HETEROPOLYANIONS; PROGRESS; SOLVATION; FLUIDS

L26 ANSWER 5 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
ACCESSION NUMBER: 93:37275 SCISEARCH
THE GENUINE ARTICLE: KG284
TITLE: DRAG RELATIONSHIPS FOR **LIQUID** DROPLETS SETTLING IN A CONTINUOUS **LIQUID**
AUTHOR: GREENE G A (Reprint); IRVINE T F; GYVES T; SMITH T
CORPORATE SOURCE: BROOKHAVEN NATL LAB, DEPT NUCL ENERGY, UPTON, NY, 11973 (Reprint); SUNY STONY BROOK, DEPT MECH ENGN, STONY BROOK, NY, 11794
COUNTRY OF AUTHOR: USA
SOURCE: AICHE JOURNAL, (JAN 1993) Vol. 39, No. 1, pp. 37-41. ISSN: 0001-1541.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: ENGI
LANGUAGE: ENGLISH
REFERENCE COUNT: 6

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

TI DRAG RELATIONSHIPS FOR **LIQUID** DROPLETS SETTLING IN A CONTINUOUS **LIQUID**

AB Experiments are reported in which the drag of single liquid droplets settling in a tall column of another lighter **immiscible** liquid are measured. The experimental data for the eight pairs of liquids that were tested covered a range of droplet. . . settling were encountered. In the first regime, the droplets remained spherical, and the drag agreed very well with established solid **sphere** drag models. In the second regime, the droplets became deformed and oscillated; the drag was found to depart suddenly from. . .

=> d 6 7 l26 kwic ibib

L26 ANSWER 6 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
TI DYNAMICS OF ION TRANSFER ACROSS A **LIQUID-LIQUID** INTERFACE - A COMPARISON BETWEEN MOLECULAR-DYNAMICS AND A DIFFUSION-MODEL

AB Most theoretical approaches to ion transfer dynamics across a **liquid-liquid** interface describe the process as a stochastic crossing of a one-dimensional barrier whose shape is a priori unknown. We describe a molecular model of the ion transfer dynamics across an interface between two **immiscible** polar and nonpolar liquids. The results of extensive molecular dynamics trajectory calculations for the ion transfer are compared with the. . . an independent free energy calculation using non-Boltzmann sampling. Near quantitative agreement is found, with discrepancies that may be attributed to solvent-**shell** exchange dynamics.

ACCESSION NUMBER: 92:36527 SCISEARCH
THE GENUINE ARTICLE: GY249
TITLE: DYNAMICS OF ION TRANSFER ACROSS A **LIQUID-LIQUID** INTERFACE - A COMPARISON BETWEEN MOLECULAR-DYNAMICS AND A DIFFUSION-MODEL
AUTHOR: BENJAMIN I (Reprint)
CORPORATE SOURCE: UNIV CALIF SANTA CRUZ, DEPT CHEM, SANTA CRUZ, CA, 95064 (Reprint)
COUNTRY OF AUTHOR: USA

average distance between. . . is less than a threshold value, resulting
in a ''chain reaction'' of coalescences. The threshold value is calculated
using a ''**shell**'' model that is based on the boundary integral approach. Another ''many-drop'' model is developed to test the **shell** approximation. We show that, although the **shell** model is adequate, its results can be improved by lowering the **shell** surface tension. (C) 1997 American Institute of Physics.

L26 ANSWER 3 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
ACCESSION NUMBER: 97:296744 SCISEARCH
THE GENUINE ARTICLE: WT012
TITLE: Small-amplitude oscillations of encapsulated liquid drop interfaces
AUTHOR: Kawano S (Reprint); Hashimoto H; Ihara A; Azima T
CORPORATE SOURCE: TOHOKU UNIV, INST FLUID SCI, AOBA KU, 2-1-1 KATAHIRA, SENDAI, MIYAGI 98077, JAPAN (Reprint)
COUNTRY OF AUTHOR: JAPAN
SOURCE: JSME INTERNATIONAL JOURNAL SERIES B-FLUIDS AND THERMAL ENGINEERING, (FEB 1997) Vol. 40, No. 1, pp. 33-41. Publisher: JAPAN SOC MECHANICAL ENGINEERS SANSHIN HOKUSEI BLDG, 4-9 YOYOGI 2-CHOME SHIBUYA-KU, TOKYO 151, JAPAN. ISSN: 1340-8054.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: ENGI
LANGUAGE: English
REFERENCE COUNT: 20
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The oscillating interfaces of an encapsulated **liquid** drop, which comprises an outer **liquid shell** and an inner gas bubble, are studied experimentally and theoretically. Using a sequential production device of encapsulated drops in **liquid-liquid** -gas systems, the oscillating motions of encapsulated drop interfaces are observed in detail under various flow conditions. To investigate the dynamics. . . the inner interface amplitude to outer one of the encapsulated drop are investigated quantitatively. Furthermore, the oscillation frequency of the **liquid-liquid** interface of the encapsulated drop in the **immiscible** liquid is experimentally obtained for various liquids. Comparing the theoretical results with the experimental ones, the validity of the theoretical. . .

L26 ANSWER 4 OF 7 SCISEARCH COPYRIGHT 1999 ISI (R)
ACCESSION NUMBER: 95:509891 SCISEARCH
THE GENUINE ARTICLE: QW194
TITLE: LINEAR-DEPENDENCE OF THE STANDARD ION-TRANSFER POTENTIALS OF POLYANIONS AT THE OIL-VERTICAL-BAR-WATER INTERFACE ON THE SURFACE INTERACTION ENERGY AND THE CHARGE
AUTHOR: AOKI K (Reprint)
CORPORATE SOURCE: FUKUI UNIV, DEPT APPL PHYS, 9-1 BUNKYO 3 CHOME, FUKUI 910,
JAPAN (Reprint)
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF ELECTROANALYTICAL CHEMISTRY, (18 APR 1995) Vol.
386, No. 1-2, pp. 17-23.
ISSN: 0022-0728.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: ENGLISH
REFERENCE COUNT: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB . . . surface energy density or the surface tension at the interface